Program Data Management Plan

Portland Harbor Pre-Remedial Design Investigation – Portland Harbor Superfund Site

Prepared by

U.S. Environmental Protection Agency Region 10

November 2017

Program Data Management Plan for Portland Harbor Pre-Remedial and Remedial Design Investigations Portland Harbor Superfund Site

TITLE AND APPROVAL SHEET

_____ _____

Eva DeMaria **Date**

EPA Remedial Project Manager

TABLE OF CONTENTS

Figures

Appendices

Definitions and Acronyms

DMP	data management plan
EPA	U.S. Environmental Protection Agency
ERT	EPA Emergency Response Team located in Edison, NJ
HUC	hydrologic unit code
ID	identification
PHSS	Portland Harbor Superfund Site
RM	river mile
RPM	Remedial Project Manager (EPA Region 10)
Scribe	data management application (created for ERT)
Scribe.NET	web-based portal for archiving Scribe project files and data

1.0 Introduction

To ensure that environmental data collected at the Portland Harbor Superfund Site (PHSS) adhere to certain standards and practices, a programmatic level data management plan (DMP) was developed that provides overall guidance and data requirements for the various performing parties who conduct sampling for PHSS remedial pre-design and design investigations. While this DMP is a standalone document, it is to be used in concert with the statement of work, Region 10 data management plan, and the respective quality management plans developed for each performing party sampling effort.

1.1 Site Background

The site is located along the lower reach of the Willamette River in Portland, Oregon, and extends from approximately river mile (RM) 1.9 to 11.8. While the site is extensively industrialized, it is within a region characterized by commercial, residential, recreational, and agricultural uses. Land use along the lower Willamette River in the site includes marine terminals, manufacturing, other commercial operations, public facilities, parks, and open spaces. The State of Oregon owns certain submerged and submersible lands underlying navigable and tidally influenced waters. The ownership of submerged and submersible lands is complicated and has changed over time.

This lower reach was once a shallow, meandering portion of the Willamette River but has been redirected and channelized via filling and dredging. A federally maintained navigation channel, extending nearly bank-to-bank in some areas, doubles the natural depth of the river and allows transit of large ships into the active harbor. Much of the river bank contains overwater piers and berths, port terminals and slips, and other engineered features. While a series of dams in the upper Willamette River watershed moderates fluctuations of flow in the lower portions of the river, flooding still occurs approximately every 20 years, with the last occurring in 1996.

Armoring to stabilize banks covers approximately half of the harbor shoreline, which is integral to the operation of activities that characterize Portland Harbor. Riprap is the most common bank-stabilization measure. However, upland bulkheads and rubble piles are also used to stabilize the banks. Seawalls are used to control periodic flooding as most of the original wetlands bordering the Willamette in the Portland Harbor area have been filled. Some river bank areas and adjacent parcels have been abandoned and allowed to revegetate, and beaches have formed along some modified shorelines due to relatively natural processes.

Development of the river has resulted in major modifications to the ecological function of the lower Willamette River. However, several species of invertebrates, fishes, birds, amphibians, and mammals, including some protected by the Endangered Species Act, use habitats that occur within and along the river. The river is also an important rearing site and pathway for migration of anadromous fishes, such as salmon and lamprey. Various recreational fisheries, including salmon, bass, sturgeon, crayfish, and others, are active within the lower Willamette River.

1.2 Objective and Scope

The objective of this DMP is to ensure that environmental data and supportive information are collected and managed in a manner that preserves, protects, and makes the information available

to all stakeholders, performing parties, and other affected groups. This DMP applies to data and information collected in support of the Portland Harbor Superfund Site by the performing parties involved in the pre-design sampling activities. While it does not cover all information (e.g., photos, field logs) that is managed for specific projects, it is intended to address those types of data deemed critical to overall decision making for the site. The subsections below identify the general data categories, performing parties collecting environmental data, and major sampling activities.

1.2.1 Data Categories

This plan identifies standard data elements and data management processes for the following data categories:

- Project identification information
- Environmental sampling data
- Locational data

The individual data elements for each of these categories represent the minimal amount of information that is needed for project specific decision making and data sharing among stakeholders and performing parties. These are further identified in the Data Management section.

1.2.2 Major Stakeholder Groups, Performing Parties, and Community Groups

The major stakeholder groups, performing parties, and community groups have been identified as those groups who are actively involved in site-wide planning and environmental data collection for this site. The major stakeholders, performing parties, and community groups collecting and sharing data are:

- Memorandum of understanding members
    - U.S. Environmental Protection Agency (EPA) Region 10
    - Oregon Department of Environmental Quality
    - Confederated Tribes and Bands of the Yakama Nation
    - Confederated Tribes of the Grand Ronde Community of Oregon
    - Confederated Tribes of Siletz Indians
    - Confederated Tribes of the Umatilla Indian Reservation
    - Confederated Tribes of the Warm Springs Reservation of Oregon
    - Nez Perce Tribe
    - National Oceanic and Atmospheric Administration
    - Oregon Department of Fish and Wildlife
    - U.S. Department of the Interior
- Potentially Performing parties, please see the Portland Harbor Community Advisory Group for individual parties involved; http://www.portlandharborcag.info/.
- Primary community groups
    - Community Advisory Group
    - Willamette Riverkeeper
    - Portland Harbor Community Advisory Group

1.2.3 Major Data Collection Activities

Each performing party is to implement an investigation baseline sampling for updating existing site-wide data and provide a baseline dataset to be used for future long-term monitoring. Additionally, the data collected will be used to facilitate the completion of third-party allocation under the Comprehensive Environmental Response, Compensation, and Liability Act.

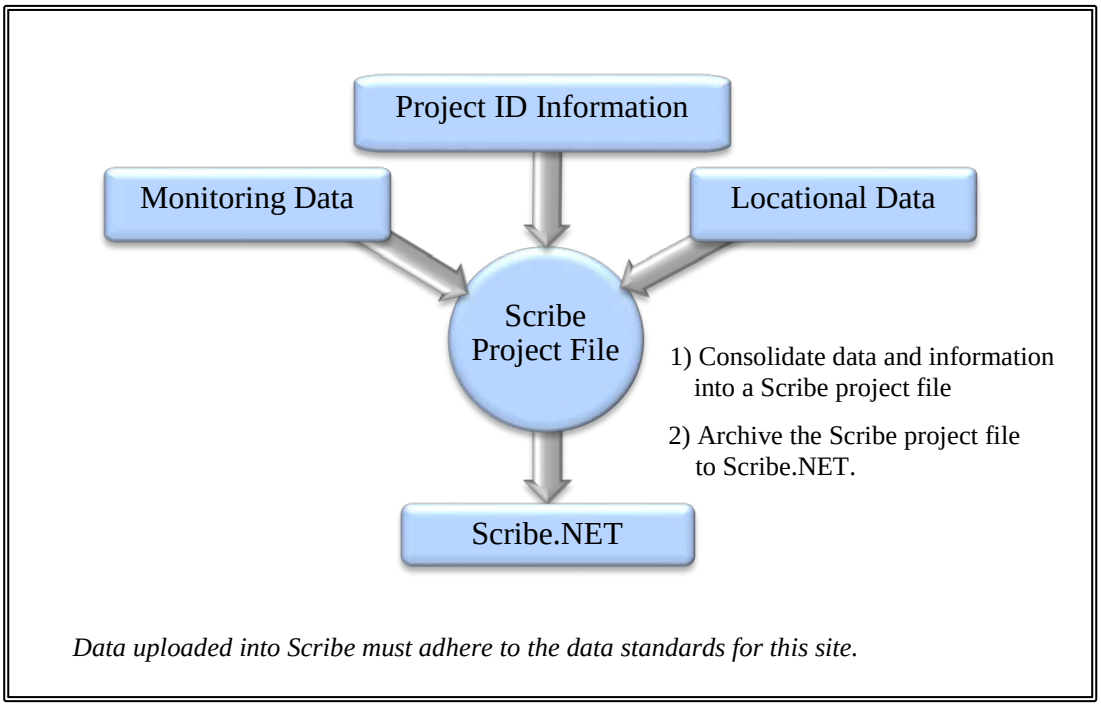
The following types of activities may be completed and will be dependent on the specific sampling identified in each respective EPA-approved sampling plan submitted by each performing party:

- Surface sediment sampling
- Fish tissue sampling
- Surface water sampling
- Sediment coring
- Downtown reach and upriver reach sampling
- Porewater background sampling for metals

2.0 Data Management

Effective data management among the Portland Harbor performing parties relies upon delivery of a minimal amount of data to a central repository using a common data management platform. The platform selected for Portland Harbor is Scribe, and the repository is the Region 10 subscription to Scribe.NET. Regardless of the data management systems that are in use by the performing parties, the Scribe software and Scribe.net repository are required for consolidation and access to project information, sampling data, and applicable locational data for each sampling activity. For many projects Scribe will already be in use for managing environmental samples. In those cases, the same Scribe project files can be used to document the project information, receive the sampling data, and publish the complete set of information to Scribe.NET. The overall data management process is illustrated on Figure 1.

Figure 1. Data Consolidation and Archiving



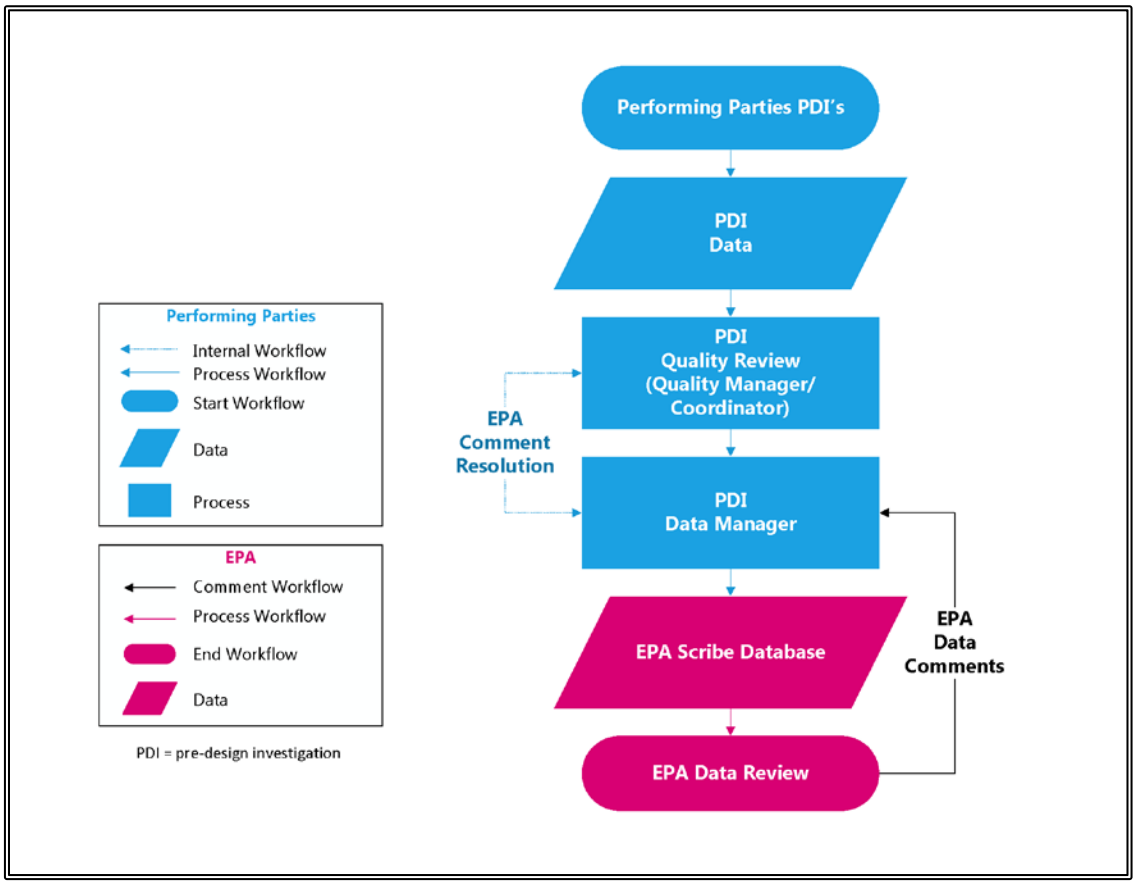
2.1 Data Management Platform

The data management platform selected for Portland Harbor is Scribe. This software is based on a Microsoft database and is available for download (www.ert.org). In addition to the Scribe software, an EPA Region 10 template, which contains the required data fields, data lists, and validation criteria, needs to be downloaded and installed. For each project, a Scribe project file is created. Here, the project-specific information is entered, which identifies both the performing party or group conducting the sampling and the type of sampling activity performed.

2.2 Roles and Responsibilities

The major roles and responsibilities for data management are identified for the performing parties in addition to the role of the data manager within each organization. Figure 2 provides an overview of the workflow between EPA Region 10 and the performing parties.

Figure 2. Process Workflow



2.2.1 Performing Parties

EPA Region 10 has the primary responsibility for oversight of all sampling and monitoring activities. EPA has identified the minimal data elements and data delivery requirements that would allow it to achieve its oversight goals and share data among the other stakeholders, performing parties, and community groups. Each of the performing parties is responsible for collecting the necessary data elements covered under their respective sampling activity, entering or uploading the information into a Scribe project file, and publishing (archiving) the complete file to Scribe.NET. To accomplish this task on a project-specific basis, the performing party will need:

- DMPs to cover their respective sampling activities
- A data manager designated to create and complete the Scribe project file

Details regarding the roles and responsibilities of the data manager are provided in the following section.

2.2.2 Data Manager

Each of the performing parties will need to designate a data manager to create and manage the Scribe project file and upload the file to Scribe.net. Regardless of the data management system each performing party utilizes, a Scribe project file is required for consolidation and archiving of

the project data to a designated national server. The major responsibilities of the data manager are to:

- Create the Scribe project file and enter project identification (ID) information
- Enter or upload locational data to the Scribe project file (coordinate with geographic information system or field staff)
- Upload lab and/or field monitoring data to the Scribe project file
- Publish the completed Scribe project file to Scribe.net
- Access and download Scribe project files from Scribe.net
- Verify Scribe.net data are accurate, complete, and in compliance with the requirements in this DMP
- Participate in Portland Harbor management coordination calls for ongoing discussion and updates or revision suggestions to this DMP

Designation and training for the data manager can be coordinated with the EPA Scribe.NET data coordinator. Web training sessions are also available from the EPA Emergency Response Team (ERT) on a regular basis. To begin, the data manager will need to go to the ERT website (www.ert.org) and download on to their computer:

- Scribe (Version 3.9.4 or current)
- EPA Region 10 template or Portland Harbor Region 10 template (once developed)

Once these have been installed, the EPA Region 10 template will need to be selected during the startup of Scribe after which it will become the default template for future projects. As a security measure, once a Scribe project file has been started, it stays locked to the originating computer until it has been relinquished by the data manager. Data and information can be uploaded into Scribe via an import wizard or hand entered through the user interface. During use, it is a recommended practice to regularly back up the Scribe project file to Scribe.net to preserve the information in the event the originating computer is lost, stolen, or experiences a system failure.

It is anticipated that there will be no coordination with respect to the EPA regional laboratory program for any of the sampling events to occur under each performing party.

2.2.3 EPA Remedial Project Managers

Administration of the EPA's oversight of the performing parties at the Portland Harbor site resides with the EPA Superfund Remedial Project Manager (RPM). The RPM will work directly with the performing parties on the direction and type of environmental sampling activities conducted. This includes data quality objective development; approval of sampling plans; and acceptance of sampling reports, assessments, and data for entry into the agency's administrative record. Central to this role is the identification of critical data needs on each approved sampling activity at each sediment management area. The RPM will receive site DMP-suggested updates from the data manager data management coordination calls and task updates to the Portland harbor DMP as necessary.

2.2.4 EPA Regional Scribe.NET Data Coordinator

The EPA Scribe.NET data coordinator (to be determined) is the project's EPA Scribe data management point of contact and reviews all EPA Region 10 Scribe deliverables for adherence to the EPA Region 10 DMP.

The EPA Scribe.NET data coordinator will communicate with all performing parties regarding all data issues related to the management of data entered into Scribe. The coordinator will also be the central point of contact for all technical information and database requirements related to the publishing of data to Scribe.

2.3 Data Elements

As stated in Section 1.2.1, the plan identifies standard data elements for project identification information, environmental sampling data, and locational data. A complete list of data elements is provided in Appendix A and the valid values in Appendix B. Valid values are also provided as drop-down entry items in the Region 10 Scribe template / Portland Harbor template (when available). The following sections summarize the information in these appendices as they relate to the major data categories.

2.3.1 Project Identification Information

Project identifiers provide the necessary descriptive information (metadata) about the project. This allows data users an efficient way of categorizing and searching archived Scribe project files. A complete list of these data elements is found in Appendix A under the Site and Event Categories. Critical among these is identification of the project, monitoring organization, and type of monitoring activity (see Appendix A; Events – Activity data element). The Activity data type is a Superfund identifier that distinguishes environmental data by its intended programmatic use (i.e., Performance Evaluation, Remedial Action). The EPA Region 10 template contains a list of valid values for the Activity data element. It is important for the data manager to verify with the EPA RPM on the agreed upon Activity type during the project planning.

2.3.2 Environmental Monitoring Data

The data elements for environmental monitoring data allow for a complete identification of the analytical results such that the data may be subject to interpretation. This includes the identification of the sample matrix, sample collection time, measurement parameter, units of measurement, limits of detection, dates of analysis, analytical method, and so on. A complete list of these data elements and their descriptors are in Appendix A under the Samples and Lab Results categories. For data being uploaded into the Lab Results table of Scribe, the sample numbers must match up against the sample numbers that are already loaded into the Samples table.

2.3.3 Locational Data

The locational data establish the spatial representativeness of the environmental sample and are critical for data analysis. These include latitude, longitude, datum, elevation, and geomethod for sample collection points. Additional spatial identifiers for water monitoring (e.g., hydrologic unit codes [HUCs]) have been added for this site as these were identified as required geospatial

identifiers by EPA. Valid values for the HUCs have been incorporated into the Region 10 template. A complete list of the locational data elements is in Appendix A under the Location and Samples categories.

2.4 Data Repository

The repository for archiving and retrieving Scribe project files is Scribe.net. This repository resides within a national server maintained by ERT and is accessed directly from Scribe. For each project file, a unique ID is assigned at the time the file is first published to Scribe.net. Access to the archived Scribe project file can be granted to other stakeholders, performing parties, and groups upon submitting a request to ERT; however, the repository files can only be updated from the computer that originated the file (unless the Scribe project file is relinquished by the originator in Scribe).

3.0 Data Verification

For Portland Harbor, Scribe is configured to undergo a self-inspection of information as part of the data generation or file upload process. The Region 10 template contains auditor rules for verification of Scribe project files as they are uploaded to Scribe.net. Close observance of these rules is the responsibility of the data manager.

4.0 Data Reporting Procedures

Final project information, monitoring, and locational data are delivered to EPA in the form of a Scribe project file that has been fully populated and published to Scribe.net. Upon completion of this task, the performing party data manager notifies the EPA RPM and the EPA Scribe.NET data coordinator and provides the Scribe project ID number (assigned at the time of publishing to Scribe.net) associated with the project for identification and access by EPA Region 10.

5.0 Data Access

Stakeholders are provided access to the Portland Harbor subscription of Scribe.net. Data access is performed through Scribe. For all the Portland Harbor Scribe project files, each stakeholder, performing party, or primary community groups has data access rights and can download the Scribe project file from Scribe. Only the originating performing party data manager can update files that have been published to Scribe.net.

Appendix A – Required Data Elements

Microsoft Excel
97-2003 Worksheet

Appendix B – Data Element Valid Values

Microsoft Excel
97-2003 Worksheet